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ABSTRACT

The Test of Phonological Awareness (TOPA) was developed to help identify children who are delayed in their development of phonological awareness. Research supports the theory that children with poor phonological awareness are at risk of later reading difficulties. Children who score in the bottom quartile of the TOPA are considered to be at risk for reading difficulties. There are two versions of the TOPA, one for kindergarten and one for early elementary school. Both are made up of two 10-question subtests with pictures used to represent words. The quality of the items appears to be adequate for screening for awareness of phonemes, and the test appears easy to administer. The TOPA yields raw scores, percentiles, and standard scores. Scores are sensitive to the time of the school year the test is administered for the kindergarten version. The normative sample was carefully selected. Norms for the kindergarten TOPA were made up from responses of 875 children from 10 states, while those for the early elementary version are from 3,654 children from 38 states. Coefficient alpha, based on 100 children at each age level, was 0.90 for kindergarten and 0.88 for early elementary, results that support the internal consistency of the TOPA. Overall, the TOPA has many strengths, including a large and representative normative sample. This does not mean that all school districts will relate to the instrument's norms. One suggestion for improvement would be to prepare local norms. Another issue of concern is the clarity of pronunciation and dialect of the administrator. The TOPA-Early Elementary correlated well with subtests from the Woodcock Reading Mastery Test. Correlations with other measures designed to measure phonological awareness were moderate for the kindergarten version and moderate to high for the early elementary version. It is concluded that the TOPA has potential for identifying children at risk for reading difficulties, and due to the ease of administration and the short time required, it can be used as a screening device. (Contains three references.) (SLD)

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The Test of Phonological Awareness

Critique

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The Test of Phonological Awareness

Title: The Test of Phonological Awareness (TOPA)
Purpose: To assess phonological awareness, the ability to isolate individual sounds in spoken words.
Age intended: 5 to 8 years old
Authors: Joseph K. Torgesen and Brian R. Bryant
Publisher: pro-ed., Inc.
Publication Date: 1994
Time Required To Administer: 15-20 minutes
Cost (1994): $27.00 per examiner manual; $29.00 per 25 student booklets, either kindergarten or early elementary; $9.00 per 25.00 profile/examination forms, either kindergarten or early elementary; $98.00 for complete kit including: examiner manual, 25 kindergarten student booklets, 25 early elementary booklets, and 25 profile/examination forms for both kindergarten and early elementary.

Purpose and Nature of Test

The Test of Phonological Awareness (TOPA) was developed to help identify children that are delayed in their development of phonological awareness. Research supports the theory that children who have poor phonological awareness are at risk of later reading difficulties. Children who score in the bottom quartile of the TOPA are considered to be at risk for reading difficulties.

There are two versions of the TOPA, one for kindergarten and one early elementary, first and second grade. Both versions are made up of two ten-question subtests. Reading ability is not required; pictures are used to represent words. The first subtest for each version deals with sounds that are the same. The second subtest deals with sounds that are different. The child marks the word that has a different sound from the other three answer choices. The primary difference between the TOPA -Kindergarten and the TOPA -Early Elementary, besides the intended age, is that the earlier measure assesses the awareness of *sound beginnings* of words, while the latter focuses on word *sound endings*. Both versions can be administered to groups or individuals. If assessing groups, small groups of six to eight children are advisable for children who have difficulty following directions.

Practical Evaluation

The TOPA uses no written words, only black and white pictures. The examiner reads the stimulus and possible answer choices that correspond to the pictures in the child's test packet. The paper instrument is more than adequately durable for the one time use by a child. The qualities of the items appear to be sufficient for screening for the awareness of phonemes. The TOPA takes into consideration sounds at the beginning and end of words and the differences or similarities of sounds that make up words. These aspects give evidence of face validity. Rapport should be easily obtained between the examiner and the child, especially on individual bases or in small groups. A sample orientation script is provided and could aid in building rapport. It helps insure that the child understands the difference between similar and different sounds and how to mark answer choices.

Qualifications for those who administer the TOPA include an examiner who has a background in educational assessment, ability to pronounce individual phonemes clearly, and ability to speak in the same dialect as the students being tested. The TOPA, after examination, does not appear to be a difficult instrument to administer and training should not be extensive. The TOPA manual gives clear directions for administering the instrument.

For scoring purposes the TOPA uses a Profile/Examiner Record. The back of this record is used for recording item performance; this form can also be used to aid in error analysis. The number of correct answers from both subtests is used to derive the child's raw score. The front of the record is used to create a profile of the child's age, performance on the TOPA, and comparisons of the TOPA with other measurements'

scores. An equation and tables are provided which enables the scorer to convert other scores to TOPA equivalents. A profile of these scores can then be graphed.

Technical Evaluation

The TOPA yields raw scores, percentiles, and standard scores. Scores are sensitive to the time of the school year the test is administered for the TOPA - Kindergarten. Data for this group was gathered in the Spring Semester. This is not a problem with the TOPA -Early Elementary version because it was administered throughout the year in three months intervals. Scores gathered for this version were used to construct a normalized standard score.

Care was taken in gathering the normative sample. Regional coordinators from each of the geographic regions of the U.S. specified a school district that had a representative sample of children. After the principals' permissions were obtained, classroom teachers administered the appropriate TOPA version to their students. The second way of gathering samples was via a purchased mailing list of kindergarten, first, and second grade teachers. Norms for the TOPA -Kindergarten are made up from 875 children from 10 states. The TOPA -Early Elementary norms are based on 3,654 children from 38 states. The resulting normative samples are representative of the national population of core ethnic classifications, genders, and United States geographic regions. The manual encourages that local norms be gathered if the provided norms are not representative of the population being assessed. Nothing of the children's socioeconomic status or first language was mentioned in the manual.

Coefficient alpha, based on 100 children at each age level, was .90 for kindergarten and .88 for early elementary. These results support the internal consistency

of TOPA. Data were used to report correlation coefficients and standard error of measurements for age levels. Calculations, with and without an adjustment for internal consistency, were performed to assess test-retest reliability. The TOPA -Kindergartens retest correlation after a six-week interval was .84, but after the error was removed it was .94. The elementary version's correlation was not as high, ranging from .69 to .77.

Evidence of content, concurrent, predictive and construct validity of TOPA are all presented. Items included were taken from a list of frequently occurring words among first graders. Items of .5 difficulty were for the test. A point-biserial correlation was used to determine item discrimination. Internal consistency reliability between same and different sound items was a .90 on a twenty-item test. The correlation between group and individually administered tests was calculated to be .77. One would expect this correlation to be higher.

A correlation between the TOPA-Kindergarten and the scores from the *sound isolation,* which requires the pronunciation of the first phoneme in words, was found to be .66. It was also correlated at .47 with a segmentation task that requires the pronunciation of each phoneme in words. When the TOPA-Kindergarten was correlated with tasks on a computer adaptive test of phonological awareness, a correlation of .42 was obtained. This correlation is rather low considering that the computer test and the TOPA-Kindergarten were both designed to measure phonological awareness.

Evidence for the concurrent validity for the TOPA-Early Elementary included correlations between the Word Analysis and Word Identification subtests of the Woodcock Reading Mastery Test. Correlations were r=. 66 and r=. 60, respectfully. Although these instruments do not exactly measure the same characteristic, the

correlations were unexpectedly high. When the TOPA-Early Elementary was correlated with *sound isolation* the result was .55. The correlation between the early elementary version with the segmentation task was .50. Because the TOPA-Early Elementary, the sound isolation, and the segmentation task were all designed to measure phonological awareness, one would expect them to have a higher correlation than the subtests of the Woodcock Reading Mastery Test, which does not directly measure phonological awareness.

Predictive validity was assessed only for the TOPA kindergarten using a sample of 90 children from two schools. The correlation for the TOPA -Kindergarten scores and the scores from the Word Analysis subtest of the Woodcock Reading Mastery Test, which measures alphabetic reading skills, was .66. Another source of evidence was that 18 out of 23 children, who were in the lowest quartile of the TOPA-Kindergarten, also scored below the median in alphabetic reading in grade one.

Three sources of construct validity are elaborated on in the manual. Items in the TOPA and other measures of phonological awareness are closely related. Next, the TOPA is claimed to have high predictive value for how children will perform in later acquisition of phonological awareness and responsiveness to training. The TOPA is also sensitive to both overall phonological similarity and ability to isolate and differentiate beginning and ending phonemes of words.

Reviewer Comments

Critiques of the Test of Phonological Awareness were found in *The Supplement of The Twelfth Mental Measurement Yearbook*. The first critique by Long (1996) points out that an analysis to determine if there was any cultural bias in item selection was not

performed. He suggests that some words selected could be unfamiliar to children with "less mainstream backgrounds." The other critique by McCauley (1996) of the University of Vermont. She expressed concerns over the representation of some ethnic groups in the normative sample. The groups mentioned are African American, Hispanic, Native American, and Asia.

Summary Evaluation

The TOPA has many strengths including a very large and representative normative sample. This does not mean that all school districts will relate to the instrument's norms. One suggestion for improvement would be to prepare local norms if the population being assessed is not representative of the norm sample. Another issue of concern is the clarity of pronunciation and dialect of the administrator. Dialects tend to vary across individuals, cultures, and geographic regions.

The TOPA-Early Elementary correlated well with subtests from the Woodcock Reading Mastery test; although the measures do not directly measure the same thing. Correlations with other measures, which were designed to measure phonological awareness, were moderate for the kindergarten version and moderate to high for the early elementary version. The TOPA has potential in identifying children at risk for reading difficulties, and due to the ease and shortness of time needed for administration it can be used as a screening device.

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